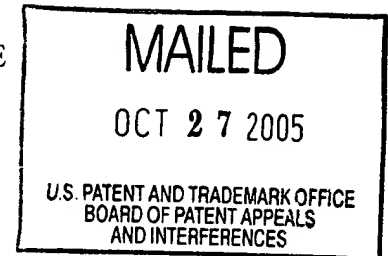


The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES



*Ex parte* ROBERT C.U. YU,  
ANTHONY M. HORGAN, SATCHIDANAND MISHRA,  
DONALD C. VON HOENE, BING R. HSIEH, EDWARD F. GRABOWSKI,  
RICHARD L. POST and KATHLEEN M. CARMICHAEL

Appeal No. 2005-2480  
Application 09/683,329

ON BRIEF

Before GARRIS, WARREN and WALTZ, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

*REMAND TO THE EXAMINER*

We remand the application to the examiner for consideration and explanation of issues raised by the record. 37 CFR §1.41.50(a)(1) (2005); Manual of Patent Examining Procedure (MPEP) § 1211 (8th ed., Rev. 2, May 2004; 1200-29 – 1200-30).

Our consideration of the issues on appeal requires that we first interpret the appealed claims by giving the terms thereof the broadest reasonable interpretation in their ordinary usage as they would be understood by one of ordinary skill in the art in light of the written description in the specification, unless another meaning is intended by appellants as established in the written description of the specification, and without reading into the claims any limitation or particular embodiment disclosed in the specification. *See, e.g., In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004); *In re Morris*, 127 F.3d 1048, 1054-55,

44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). In this appeal, we determine that the terms “pattern template,” “mask” and “patterned mask” and the position terms “on” and “over” with respect to the “pattern template” relative to the flexible substrate support sheet, as used in the appealed claims, raise issues with respect to the interpretation of the claims. Claims 1, 2, 10, 11 and 21 are illustrative (emphasis supplied).

1. A seamless flexible electrostatographic imaging member belt fabrication method comprising:

providing a flexible substrate support sheet;

placing a *first pattern template* on a first portion of the support sheet;

*producing first desired features* on the first portion of the substrate support sheet, including *removing material* from the substrate support sheet *with first emissions*, the *first pattern template preventing the first emissions from striking the support sheet and thus preventing removal of material from under the first pattern template*;

placing a *second pattern template* on a second portion of the support sheet, the second pattern template being complementary to the first pattern template;

*producing second desired features* on the second portion of the substrate support sheet complementary to the first desired features, including *removing material* from the substrate support sheet *with second emissions*, the *second pattern template preventing the second emissions from striking the support sheet and thus preventing removal of material from under the second pattern template*;

overlapping the first and second desired features;

bonding the first desired pattern with the second desired pattern to produce a seamed belt having substantially no added seam thickness; and

applying at least one coating over the seamed belt.

2. The method of claim 1 wherein *removing material* from the substrate support sheet *with emissions includes inducing a desired shape in at least one of the first and second emissions by passing the at least one of the first and second emissions through at least one mask*.

10. A seamless flexible electrostatographic imaging member belt fabrication method comprising:

providing a flexible substrate support sheet;

placing a *first pattern template* on a first portion of the support sheet;

illuminating a first part of the substrate support sheet with a laser beam to *produce first desired features* on the substrate support sheet, including *removing material* from the substrate support sheet with first emissions, the *first pattern template preventing the first emissions from*

*striking the support sheet and thus preventing removal of material from under the first pattern template;*

placing a *second pattern template* on a second portion of the support sheet, the second pattern template being complementary to the first pattern template;

illuminating a second part of the substrate support sheet with a laser beam to *produce second desired features* on the substrate support sheet, including *removing material* from the substrate support sheet *with second emissions*, the *second pattern template preventing the second emissions from striking the support sheet and thus preventing removal of material from under the second pattern template;*

overlapping the first and second desired features;

bonding the first desired pattern with the second desired pattern to produce a seamed belt having substantially no added seam thickness; and

applying at least one coating over the seamed belt.

11. The method of claim 10 wherein the illuminating a first part of the flexible substrate support sheet with a laser beam to produce first desired features on the substrate support sheet includes:

generating a laser beam;

spreading the laser beam;

*illuminating at least one patterned mask* such that parts of the spread laser beam pass through the mask as machining light; and

*directing the machining light onto the first portion of the substrate support sheet and the first pattern template.*

21. A seamless flexible electrostatographic imaging member belt fabrication method comprising:

providing a flexible substrate support sheet;

placing *first and second pattern templates* on respective first and second portions of the support sheet;

*producing first desired features* on the first portion of the substrate support sheet, including *removing material* from the substrate support sheet *with first emissions*;

*producing second desired features* on the second portion of the substrate support sheet complementary to the first desired features, including *removing material* from the substrate support sheet *with second emissions*;

*removing material* from the substrate support sheet *with first and second emissions* including *inducing a desired shape* in at least one of the first and second portions *by passing the at least one of the first and second emissions through at least one mask.*

overlapping the first and second desired features;

bonding the first desired pattern with the second desired pattern to produce a seamed belt having substantially no added seam thickness; and

applying at least one coating over the seamed belt, the at least one coating including a photoconductive coating.

We determine from the plain language of independent claims 1, 10 and 16 that the “pattern template” can be positioned “on” or “over” (claim 16) the substrate support sheet, and is used to produce a “feature” in the substrate support sheet by “removing material” therefrom by interaction with “emissions” or “laser beam,” wherein the “pattern template” prevents the “emissions” or “laser beam” from striking the support sheet, that is, preventing removal of material under the “pattern template.” However, in claim 21, the “pattern templates on” the support sheet have no specified function, and “features” are produced and material removed from the support sheet with “emissions,” the claim specifying that material is removed from the support sheet by passing “emissions through at least one mask” with no relationship specified between the “pattern template” and “mask” elements. Claim 2, dependent on claim 1, further limits claim 1 by specifying that material is removed from the support sheet by passing “emissions through at least one mask,” with no relationship specified between the “mask” and the “pattern template” elements, the latter having the relationship with the “emissions” specified in claim 1. The “pattern template” of claim 10 and the “patterned mask” of claim 11, dependent on claim 10, relate to “laser beams” in similar manner.

It is apparent from the claims that the separate elements “pattern template” and “mask” or “patterned mask” function differently with respect to the “emissions” and “laser beams,” the former preventing the “emissions” and “laser beams” from striking and removing material from the substrate support sheet while the “emissions” and “laser beams” pass through the latter. Thus, the claims seemingly require shaping the “emissions” and “laser beams” with a “mask” or “patterned mask” and the “pattern template” prevents at least a part of the “emissions” and “laser beams” from striking the substrate support sheet.

It would seem that the “pattern template” and the “mask” and “patterned mask” should serve the same function of directing the “emissions” and “laser beams” to produce “features” in the support sheet by removing material therefrom. However, it is not apparent how the two elements with dissimilar characteristics in this respect interact with each other with respect to the

same “emission” or “laser beam” in claims 2 and 11. Claims 1, 3 through 10, 12 through 20, 22 and 23 encompass methods that include a “mask” or “patterned mask” because of the open-ended transitional term “comprising.” In claim 21, the “pattern templates” can have the function of guiding “emissions.”

In the written description provided in the application, the term “pattern template” appears only in the claims as originally filed, and the term “template” appears only in the abstract, neither disclosure providing guidance in the above matters. Indeed, the term “template” is not even used in the description of alternative embodiments employing different material removal means (page 14, ¶ 0051). We do find the term “mask” which is initially introduced in the written description in the specification with the phrase “removing material from the substrate with first and second emissions including inducing a desired shape in at least one of the first and second emissions by passing the at least one of the first and second emissions through at least one mask” (page 13, ¶ 0041; *see also* page 29, ¶ 0100). Embodiments of methods employing undescribed “masked excimer laser beams” are disclosed (e.g., page 19, ¶ 0066, page 26, ¶ 0088, and page 28, ¶ 0097).

The use of a “mask” is explained in the description of specification **FIG. 7** as “fixed laser 76 . . . [and] surface 80 (or thin metal mask) bearing a mask 81 having a desired cutting pattern with a laser beam 82 . . . [which] passes through the mask only in the desired cutting pattern,” wherein “the mask features are 2 [*sic*] 10 times larger than the actual desired cutting pattern” and “[t]he mask pattern causes the belt substrate [85] to be illuminated with the shape of one or more features that are to be reproduced” (*id.*, pages 17-18, ¶ 0060; *see also* page 14, ¶ 0050). It is clear that the “surface 80 (or thin metal mask) bearing a mask 81” shapes the laser beam before it strikes the substrate support sheet, but there is no “patterned template” in the laser beam path between the “mask” or “patterned mask” and the substrate support sheet. It is further disclosed that “two or more masks, each mask having an appropriately sized feature” which “can be successively aligned to produce the complex feature,” along with “plural lasers” can be used (page 18, ¶ 0061). The formation of a “groove” by “moving the substrate support sheet and the emissions sport relative to each other” is disclosed without describing the structure forming the “emissions spot” (page 12, ¶ 0040).

We note here that the terms “mask,” “pattern” and “template” have the respective ordinary dictionary usage in context of “[a]n opaque border or pattern placed between a source of light and a photosensitive surface to prevent exposure of specified portions of the surface,” “[a] plan, diagram, or model to be followed in making things: dress pattern,” and “[a] pattern or gauge, as a thin metal plate with a cut pattern, used as a guide in making something accurately.”<sup>1</sup> The definitions describe essentially the same structure and function as illustrated and described for “surface 80 (or thin metal mask) bearing a mask 81” as indeed, this illustrative structure is a “mask” providing a “pattern” or “template” with the dual function of preventing and permitting, respectively, exposure of different areas of the support sheet to the “emissions” or “laser beams” for the purpose of removing material from the support sheet to obtain the desired feature.

However, while it may appear from the written description in the specification, including the drawings, that a “pattern template” and a “mask” or “patterned mask” are the same element having the same function for the same purpose, it also appears from the claims as originally filed and on appeal that these are different elements which can be positioned differently with respect to each other and to the surface of the support sheet. We find no guidance in these respects in either the answer (e.g., page 13, first paragraph) or the brief (e.g., pages 5-7 and 9) and reply brief in these matters.

Accordingly, the examiner is required to take appropriate action consistent with current examining practice and procedure to interpret each of the appealed claims with respect to the terms and the relationship between the elements encompassed by the terms that we have discussed above, and further considering the ground of rejection with respect to the claims as interpreted, with a view toward placing this application in condition for decision on appeal with respect to the issues presented.

This remand is made for the purpose of directing the examiner to further consider the ground of rejection. Accordingly, if the examiner submits a supplemental answer to the Board in response to this remand, “appellant must within two months from the date of the supplemental

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<sup>1</sup> See generally, *The American Heritage Dictionary, Second College Edition* 769, 911, 1251 (Boston, Houghton Mifflin Company, 1982); *se also Webster's II New Riverside University Dictionary* 730, 862-63, 1191 (Boston, The Riverside Publishing Company. 1984).

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examiner's answer exercise one of" the two options set forth in 37 CFR §1.41.50(a)(2) (2005), "in order to avoid *sua sponte* dismissal of the appeal as to the claims subject to the rejection for which the Board has remanded the proceeding," as provided in this rule.

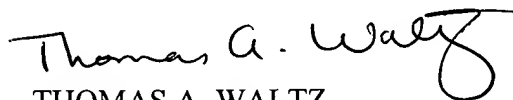
We hereby remand this application to the examiner, via the Office of a Director of the Technology Center, for appropriate action in view of the above comments.

This application, by virtue of its "special" status, requires immediate action. *See* MPEP § 708.01(D) (8th ed., Rev. 2, May 2004; 700-127). It is important that the Board of Patent Appeals and Interferences be informed promptly of any action affecting the appeal in this case. *See, e.g.,* MPEP§ 1211 (8th ed., Rev. 2, May 2004; 1200-30).

*Remanded*

  
BRADLEY R. GARRIS )  
Administrative Patent Judge )  
)

  
CHARLES F. WARREN )  
Administrative Patent Judge )  
)

  
THOMAS A. WALTZ )  
Administrative Patent Judge )  
)

BOARD OF PATENT  
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